

United States Department of Agriculture
EXTENSION SERVICE
Washington, D. C.

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† WHAT ARE EFFECTIVE METHODS TO USE IN TEACHING ECONOMIC INFORMATION?/1

How can the effectiveness of our teaching of economic information to rural families be increased?

In our teaching we seek to present to rural families economic information which will aid them to make plans for family living and to reach a higher level of living. To present this information, a variety of means and agencies is used, such as meetings, forums, conferences, result demonstrations, farm and home visits, bulletins, circular letters, news stories, radio, and exhibits.

Teaching methods cannot be separated from subject matter presented; therefore, our tools are selected only after we are clear as to our purpose, and we select the tools to do the job - to help the families to determine their needs and to work out possible and practical solutions to the point where they attain satisfaction. We do not want inadequate or cumbersome methods.

During this conference various approaches have been used. The panel conference method has been used in the afternoon as a basis for group thinking. In the early morning meeting our attention has been centered on a Georgia farm family that has a land-bank commissioner loan, and on farm families in Elbert County.

Dr. Reynolds described a Georgia farm family with a gross cash income of \$650 from farming operations on an 87-acre farm. The appraiser from the Federal Land Bank estimated that 70 percent of the income was necessary for farm operating expenses, for repairs on buildings and improvements, for taxes, depreciation on personal property, interest on other debts, installment on loan. This left 30 percent or \$195 for family living. This family, she explained, had a net cash income of \$115 from 25 rented acres, which made a total of \$310 for a family of two adults and eight children.

Since we did not know how the \$310 was spent, Dr. Reynolds used Elbert County figures, /2 which showed that the average amount spent for farm living by 300 families, who average 4.5 members, was \$289. The value of farm-furnished food used by these families was \$293. Their cash outlay was \$92 for food. Farm-furnished housing was estimated at \$43, and \$5 was the average amount spent for this item. Household operation, farm furnished was \$31, purchased, \$21; clothing, \$60; furnishings and equipment, \$9;

/1 Presented by Gladys Gallup, extension home economist, Surveys & Reports Section, at the Home Demonstration Workers' Conference, Athens, Georgia, December 4-9, 1939.

/2 Taken from Consumer-Purchases Study figures, which include towns in 12 counties in Georgia and Mississippi.

automobile and other transportation, \$30; personal care, \$8; medical care, \$25; recreation, \$6; tobacco, \$11; reading, \$3; education, \$6; gifts, community welfare, and taxes, \$9; other items \$4.

We discussed further the general situation in Elbert County to get at needs and problems and some objectives of farm families in that county as well as those of all farm families in Georgia.

Some objectives brought out in this discussion, as well as in other discussions during the week, are as follows:

Some Objectives for Better Family Living

Income: ..	Increase of cash income. Better distribution of income. Better use of resources. Increase of food and feed production. Better understanding of credit. Better understanding of the A.A.A. program. Better use of the land: Economic contribution to family life; social contribution to family life. Conservation of soil. Home ownership.
Better housing:	More comfortable houses. Larger houses. Better equipment (including electricity and water). More storage.
Health: ..	Better sanitation. Better nutrition.
Human relation- ships: ..	Better family relations. Better community life.
Social status and cultural development:	Education for children. Better recreational opportunities. A better philosophy of life - appreciation of farming as "a way of living" as well as "a way of making money." Appreciation of beauty - need for appreciation of values in rural life that are not based on cash income. Open country, trees, grass, and love of soil. Living closer to beauty and to nature. Pride in owning land. Opportunity to be a rural leader.

We are interested in information that will help these families to attain their objectives. We are interested also in the best methods of teaching the information.

In the description of the Georgia farm family, we saw graphically evidenced the need of joint economic planning for the farm and the home. By centering our attention on this Georgia family, the following values of the use of a case study in discussion were brought out:

Values of the use of the case study
in discussion

1. It promotes concreteness.
2. It centers attention on people, not on subject matter.
3. It promotes unity in discussion.
4. It helps us to consider the family as a unit and to help them in joint farm and home planning; and, as Dr. Reynolds pointed out, helps extension workers to integrate programs and work on needs of the family as a whole.
5. It gives, through intensive study of one family as a small sample, a broader conception of the whole field, and it better helps us to see the many complications in a family situation and how much easier it is to generalize than to advise on a particular program for a family.
6. It encourages the questioning of our own program and subject-matter help as to its effectiveness in meeting the needs of the family, and makes us less willing to form hasty judgments or give ready-made answers and solutions.
7. It helps in the analysis of our programs to see if what we are now doing is directed to some of the needs that are evident in the case study.

Limitations of the use of the case
study in discussion

1. Case studies, because of certain differences in each family, make it difficult to see any value in relation to other families; averages of expenditures and situations of type families might seem more possible and fair for use in comparison.
2. Case studies require much time of extension agents and are limited to two or three families in a county. But this limitation can be overcome if the practices adopted by each family can be used as recommended practices to others in the community through the demonstration method.
3. Much time can be lost in discussion of irrelevant details.
4. It is difficult to select a family which is representative of a majority of families in the area.
5. There is not always time enough to understand a family, and as a result we may have a very superficial picture.
6. We may be motivated through interest to make suggestions for adjustments without adequate information, rather than to get and discuss information that may help the family to make adjustments.

As stated before, a variety of means and agencies is used in Extension. They are listed on Chart 1, Relative Influence of Extension Methods.

The facts in this chart are based on the opinions of large numbers of farmers and farm women in regard to the tools used in Extension that have in any way influenced them to adopt improved practices. The farm family knows better than anyone else the Extension activities to which it has been exposed and from which it has obtained much of the information it has actually put into practice on the farm and in the farm home.

On Chart 2 - Rate of Adoption of Practices as Affected by Number and Kinds of Exposures to Extension Teaching Methods, there is an increase of adoption of practices as the number of different kinds of exposures increases.

On Chart 3 - Influence of Extension Teaching Methods - The Completed Job of Teaching, there is a picture of the interdependence of various methods, and how one reinforces another to get a complete job of teaching done.

Mr. Hearne, county agent leader in Missouri, /3 who drew up this chart, has made certain assumptions. One of these is, that the result demonstration is basic to all means and agencies - basic in building local confidence and basic in program planning.

We know from studies that permanent learning is attained faster if the family is exposed to four ways of learning: Seeing, hearing, discussing, and doing. We know, too, that our teaching methods should enable us to reach a large percentage of rural people of all income groups and of all age groups.

If a family in the community uses economic information as a basis for making some decisions and adjustments, and improving practices, and if these are practical for others in the community, we should use this family as a demonstration to others. Furthermore, our best leadership should come from the homes where such adjustments have been made.

Result demonstrations that show results accomplished through planning, such as the farm and home unit demonstration, a home-production plan carried through, an adequate garden, a food-preservation project, an adequate storage space, improvement in housing or household equipment, or achievement of educational plans for the children are local proofs of good practices.

Visits to these demonstrations show members of the community the value of the reduction of certain expenditures; the value of the increase of food and fuel on the farm, of better use of home products, of better housing conditions, of better equipment, and of better health.

The result demonstration furnishes cost data and other basic information of use in revising the program, and it helps the agent to keep in close contact with farm and home conditions. The result demonstration establishes confidence in the agent and in Extension work.

Extension studies made in the Surveys and Reports Section /4 have shown that the demonstration method accounts for the adoption of only 7 practices out of every 100.

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- /3 Hearne, C. C. Methods of increasing the effectiveness of extension work. Talk given at the Extension Agents' Annual Conference, Lexington, Kentucky, November 23, 1938.
- /4 Wilson, M. C. Extension methods and their relative effectiveness. U. S. Department of Agric. Tech. Bul. 106. 47 pp., illus. Washington, D.C. 1929.

A result demonstration conducted with one family necessarily makes this method a poor one from the standpoint of reaching large numbers of people. Other methods, meetings, tours to the home, and publicity must be used to make this demonstration reach a satisfactory number.

Meetings are based on local facts and situations, and promote personal acquaintance between demonstrator and people. They provide change in environment and worth-while social contacts. Group psychology facilitates action. Meetings motivate and stimulate action through seeing, hearing, discussing, and doing.

Meetings are efficient teaching methods. Extension studies show that meetings of all types influence the adoption of slightly over 30 practices out of every 100 adopted. The meeting is more effective when supplemented by charts, slides, film strips, or blackboard. By the use of group discussion, which we try to have at every meeting, we provide an opportunity for people to take part.

The combination of the result demonstration and the meeting is good from a teaching point of view. Extension research shows that out of every 100 adopted practices 37 are affected by this combination.

In our meetings we need to keep in mind that adults learn a little more slowly than children of high-school age, but, because of their wider background of experience, they may find problem-solving easier; and because they have a will to learn, they may have more interest and attention and motivation with less waste of energy.

This emphasizes the use of the conference method with group thinking as a basis when problems are to be solved, and also the need of following up with a method demonstration to help on the solution to the problem, especially if a skill is involved.

In our meetings we need to keep in mind practical conclusions that have been made from studies in general education relating to teaching methods, such as those summarized by H. L. Hollingworth:
/5:

Visual combined with auditory presentation of material is often more impressive than either alone.

Most persons are visual-minded; they more easily grasp and better remember what they see than what they hear.

/5 Hollingworth, H. L. The psychology of the audience. Chapter VII. New York. The American Book Co., 1935.

Among the special devices usable in oral delivery by way of emphasis, the most effective is repetition, to the extent of three or more assertions.

Repetitions are most effective when they are spaced or distributed rather than massed at one point of the discourse.

A typical educated audience, presented with subject matter in which there is already some interest, may be expected to forget about two-thirds of it within one week.

A brief attempt by the listener to review or report the subject matter of a lecture at its close notably improves the recollection of the subject matter.

Any device that succeeds in provoking active expression of or action upon what has been observed is a useful aid in promoting permanent impression.

If we use charts as a device at a meeting we should use only the number the audience can comprehend, and charts large enough for the audience to see.

Publicity, according to extension studies, accounts for the adoption of 11.8 practices out of every 100 changed. Publicity, properly used with demonstrations and meetings, enables large numbers of our people to read economic information. We write news articles and circular letters based on local facts, situations, and wants to get people acquainted with better practices.

Circular letters should stimulate the farm family to act. We may get them to act by inviting them to a meeting or to a tour to see results of good planning, such as the farm home unit demonstration.

Bulletins such as those on business transactions or State publications on analysis of accounts provide definite, accurate, and detailed information.

News stories cost less than any other method, carry the prestige and confidence of the printed word, and reach those who otherwise might never seek the advice of the extension agent. Result demonstrations give us a fund of information that can be used in news stories.

Exhibits and posters may influence people who are not reached by other methods. They are a means of teaching standards of products and call attention to other methods, therefore they fall into the information group.

Personal service, such as farm visits, office and telephone calls, and personal letters, accounts for the adoption of 21 out of every 100 changed practices. The farm-home visit gives the agent first-hand information regarding farmers' problems and activities, and develops good will. Personal-service methods are excellent confidence builders because of the personal contact.

Twenty-one practices out of the 100 adopted are credited to indirect influence. Indirect spread of improved farm and home practices from one neighbor to another shows the results of satisfaction and confidence.

In closing, after considering these various teaching methods, we may well ask ourselves the following questions:

First: How many of us have helped a family with farm and home plans, home-production plans, or food-preservation budgets which have been carefully carried through, and then have never asked to hear the results at meetings or otherwise?

Do we know of homes that have actually improved their conditions because of the use of economic information? If so, have we used these homes as demonstrations?

Have any of the members of the family assisted as leaders in teaching others, or have we selected leaders to help us who can talk well and handle charts, but who have not used economic information in their own homes in making decisions and adjustments?

How many of us have asked leaders to do their job without helping them to have adequate material to work with, such as simple charts? How many of us, on the other hand, have used too many charts in one meeting?

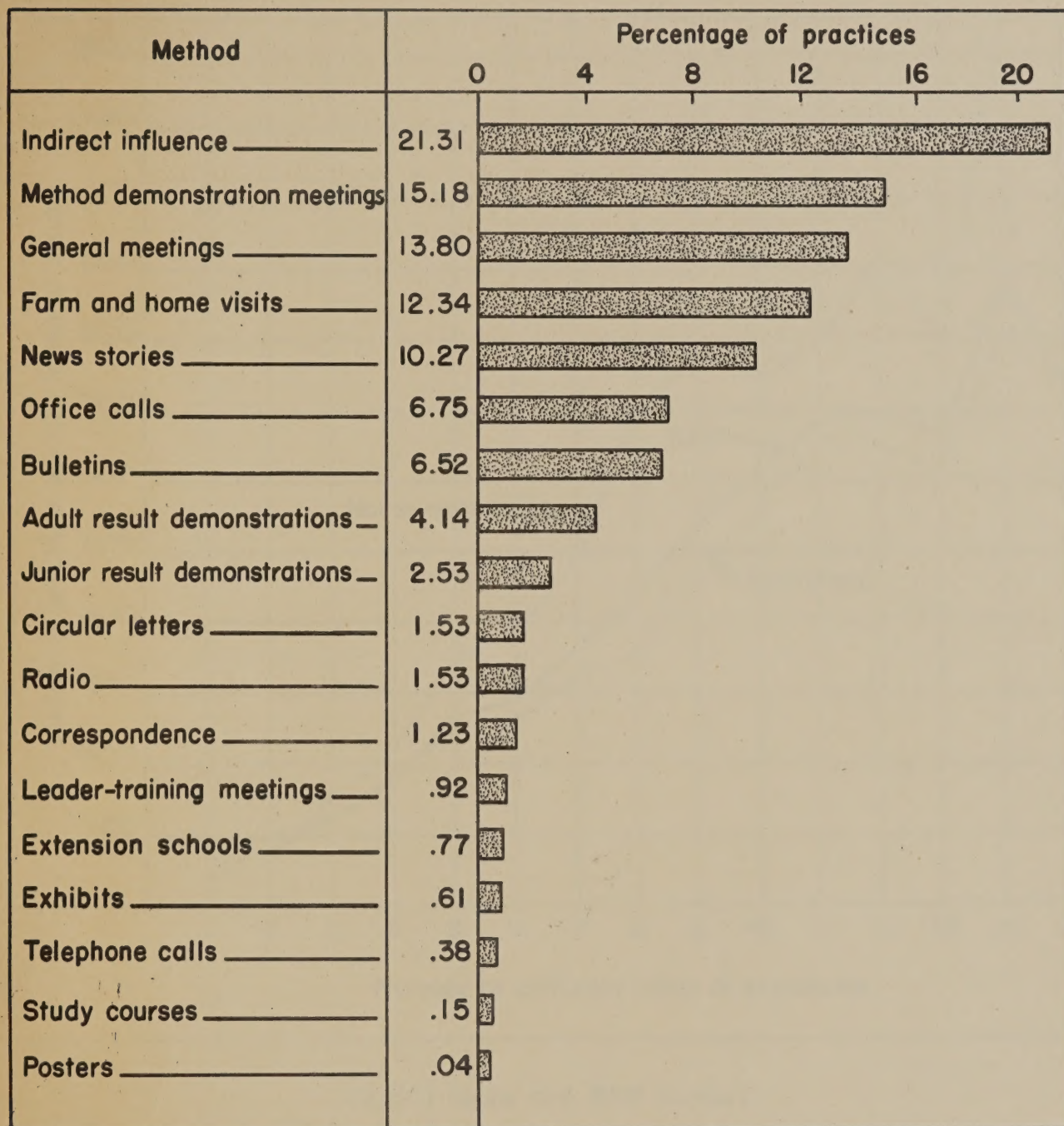
Second: How many of us use the Farm Family Living Outlook Reports as a basis for information and start our meetings with good questions based on experience and interest of the group such as the following?

- (1) What do you plan to do this year in the way of production?
- (2) What do you plan to purchase this year?

Third: How many of us use letters and news articles to announce an outlook meeting, and then never write another news article telling what happened or giving some economic information which might help those who could not come to the meeting?

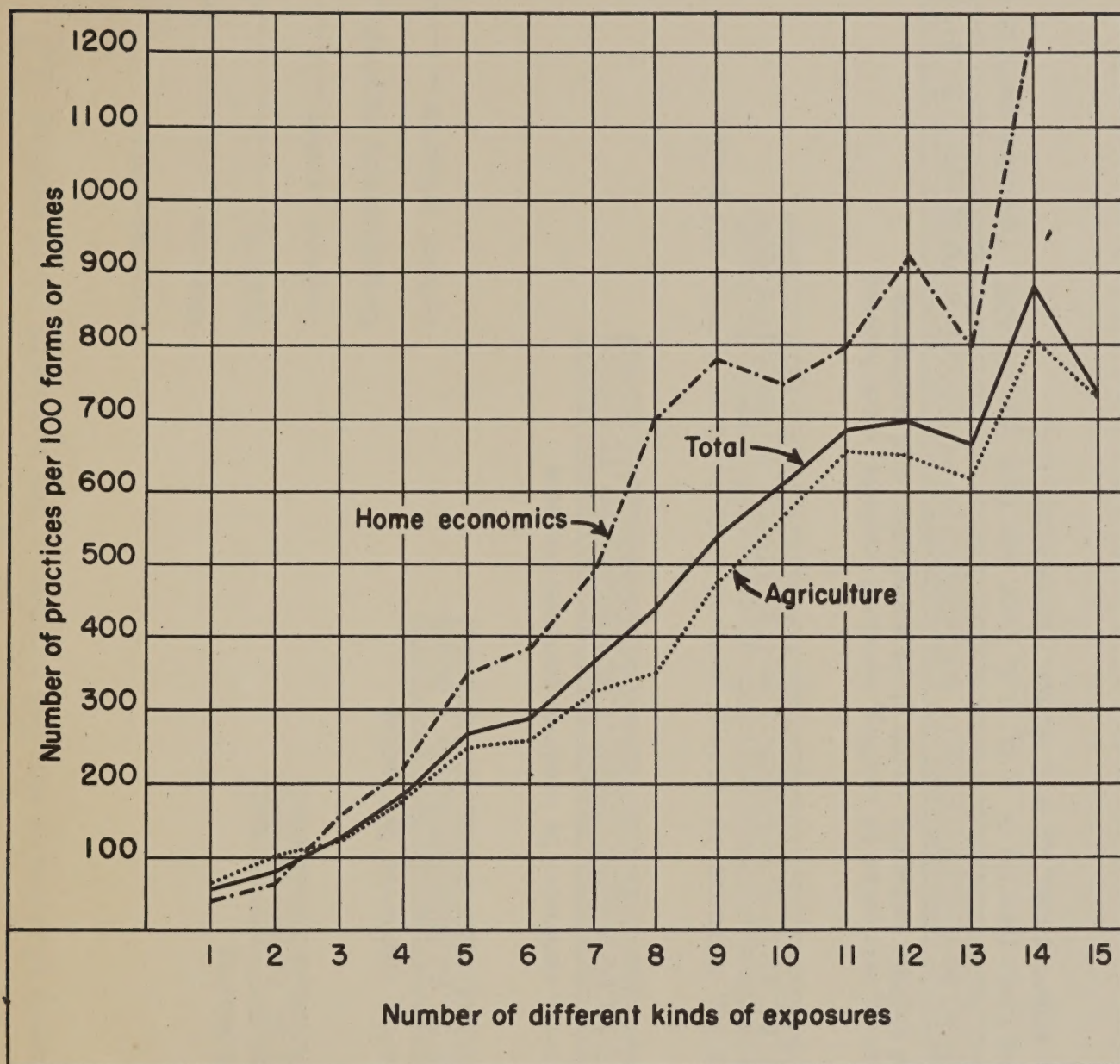
Fourth: How many of us in presenting information employ all the possible teaching means and agencies, dovetailed together, in order to bring the job to completion?

Chart 1. — Relative effectiveness of extension methods 1./



1/ Wilson, M. C. Extension methods and their relative effectiveness.
U. S. Dept. Agr. Tech. Bul. No. 106

Chart 2. -- Rate of adoption of practices as affected by number of kinds of exposures to extension teaching methods 1/



(2,501 farms and 869 homes)

1/ Wilson, M. C. Unpublished data.

Figure 2 - Graph of the variation of the ratio of the maximum to the minimum value of the function $f(x)$ as a function of the parameter α .

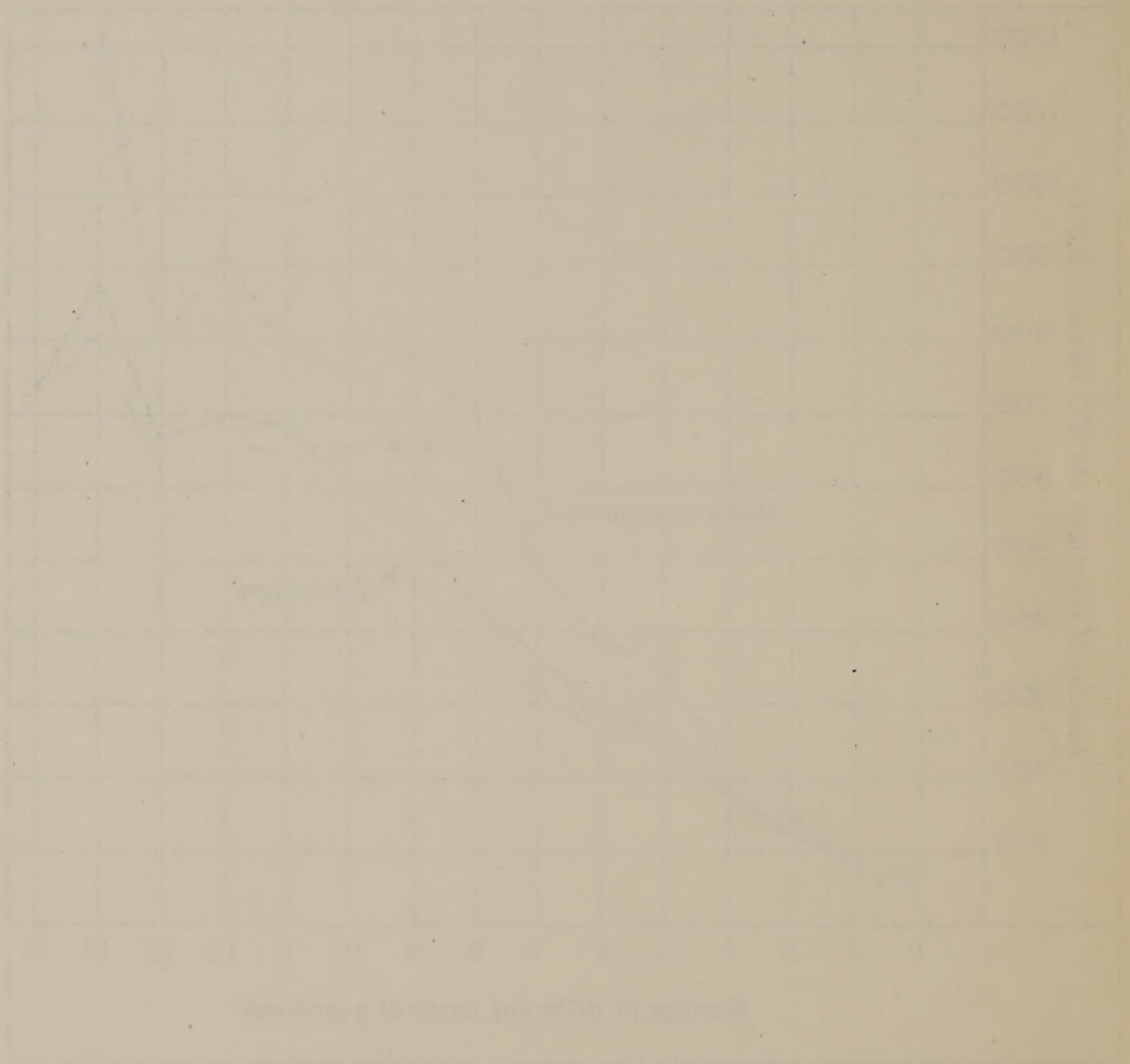


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Figure 2 - Graph of the variation of the ratio of the maximum to the minimum value of the function $f(x)$ as a function of the parameter α .

Chart 3

Influence of extension teaching methods — the completed job of teaching 1/

Seeing and doing

6.67

Seeing, doing, and hearing

6.67

30.82

Seeing, doing, hearing, reinforced by reading

6.67

30.82

11.80

Seeing, doing, hearing, reinforced by reading, personal contacts

6.67

30.82

11.80

20.70

Seeing, doing, hearing, reinforced by reading, personal contacts, more hearing and seeing

6.67

30.82

11.80

20.70

8.70

Seeing, doing, hearing, reinforced by reading, personal contacts, more hearing and seeing, and indirect influence, which gives satisfaction and confidence

6.67

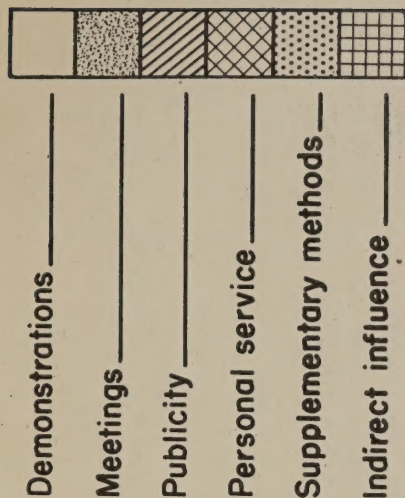
30.82

11.80

20.70

8.70

21.31



1/ Based on figures taken from fig. 4, p. 9, U. S. Dept. Agr. Tech. Bul. No. 106, Extension methods and their relative effectiveness, by M. C. Wilson. Washington, D. C.

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